



## Outdoor Skills Lesson Plan for Winter Survival/Hike

PARTY Grant funded by Resource Enhancement and Protection  
Conservation Education Program (REAP – CEP)  
& Polk County Conservation



**Goal:** The participant will gain knowledge on both human and animal winter survival

**Objective:**

1. Students will be able to list five things to do or not to do if stranded in the outdoors.
2. Students will learn what to put into their own winter survival kit.
3. Student will be able to list two different survival techniques animals may use to survive the winter

**Materials:** Examples of appropriate winter clothing, winter survival kit, 1 film canister with a lid for each participant, thermos (1 quart) of liquid knox gelatin (will be enough for 20 participants), suitable habitat

**Season:** Winter

**Time:** 1 – 1 1/2 hours

### Activity - Animal Antifreeze

1. Explain that a hibernating animal (chipmunk) or winter sleeper (bear) must select a sleeping spot that will provide protection from the winter cold. If the temperature of the sleeping spot falls too low, the sleeping animal may freeze to death.
2. Each participant is given an “animal”(a film canister), ask them to pop the head off(the lid) and fill the animal with “blood” (liquid knox gelatin from the thermos)
3. The participants job is too find a suitable shelter – sleeping spot that will protect them from freezing over the winter months. Explain that burrowing and building with non-living materials is permitted. Define the boundaries before sending the group out. Give the participants five minutes to select sleeping spots for their animals.
4. **The number one rule** of this activity is **not to lose their animal** – they must remember where they put their animal.
5. After all “animals” have found their resting spot...lead the group on a winter hike.
6. Winter hike topics too include:
  - Good over wintering habitat for the animals
  - Hibernation, migration, topor
  - Animal food (acorns, insects, plants/twigs)
  - Animal tracks in the snow
7. After a 40 to 45 minute hike return to the spot where the “animals” were hidden.
8. Send the participants out to retrieve their animals.
9. Have them “pop” the head (the lid) off of their animals and see whose animal survived and who froze (solid gelatin)
10. Have the survivors explain where and what they did to help keep their animals from freezing. Lead a group discussion on how more animals could have survived. Or other items that would have been helpful, i.e. an animal fur to wrap around the container, put in area away from the wind, hide deeper in a log or hole in a tree, etc... some individuals may have decided just to carry their animal during the hike. These are all good “adaptation” strategies for a group discussion.

### **If you get lost...**

- **S** sit down, do not panic
- **T** think about your problem
- **O** observe the area
- **P** plan what to do
- don't wander, you may become more lost and confused

### **Survival Rules**

- Tell someone where you are going and when you plan to return
- Never go alone
- Take a survival kit
- Wear proper clothing and carry proper equipment, remember weather can change
- Plan your outing so you can return to your car or camp before dark
- Know how to build a fire and take proper fire starting material

### **Survival Kit** - carried in a fanny pack

**The most important essential**, however, is not on the list - "**Common Sense**". Having the right gear is one thing, knowing how and when to use it is quite another. Most often, it's not a person's equipment that saves them. It's their experience, know-how, and good judgment.

**1. Map** - Always carry a detailed map of the area you will be visiting and know how to use it!

**2. Compass** - Carry a compass, at all times, in the backcountry and know how to use it!

**3. Flashlight / Headlamp** - Flashlights and/or Headlamps are important even on day trips.

**4. Extra Food** - Whenever you go out, even for a day trip, bring extra food in case you are delayed by emergencies, foul weather, or just get lost.

**5. Extra Clothing** - In addition to the basic layers you would normally take on an outing, bring extra clothing which would get you through the worst conditions you might come up against. In addition to the extra clothes, carry an emergency shelter such as mylar Space Bag or blanket. The Space Bag only weighs about 2.5 ounces but will completely encase you and keep you warm and dry.

**6. Sunglasses** - Your eyes can experience damage from ultraviolet rays and light reflecting off of snow.

**7. First-Aid Kit** - Carry first-aid supplies for minor injuries. Carry plenty of adhesive band-aids and sterilized bandages, because they can't be easily improvised in the woods. If you purchase one, you'll most likely need to add items to it like rubber gloves.

**8. Pocket Knife** - Your basic tool kit. A good example of a single piece of gear which has multiple uses.

**9. Waterproof Matches** - Carry waterproof matches or strike-anywhere matches along with something to strike them on in a waterproof container.

**10. Firestarter** - Fire starters are useful for quickly starting a fire, especially in emergency situations. They are also useful for igniting wet wood. There are several commercial fire starters available: magnesium blocks w/striking flint; chemically-treated fire sticks, etc. In addition, numerous home-made fire starters work just fine: compressed balls of dryer lint mixed with or covered with melted paraffin; egg-carton cups filled with mixtures of wood shavings, wax, & lint; etc.

**11. Water** - Carry plenty of fresh water.

**12. Whistle** - For emergencies: when you're lost, someone else is lost, or you're hurt and need help, etc. The best choice is a plastic whistle which won't freeze up.

**Clothing** - Dress in layers for any outdoor activity. What ever you do, do not wear cotton. It does not insulate when wet and will make you cold. The basic layers should include:

**Base Layer** (lightweight thermal underwear and glove liners) – wick moisture away from the body

Fabric choices - polypropylene, silk, capalene, lycra

**Middle Layer** (vest or jacket) – insulate while allowing moisture to escape

Fabric choices - fleece and wool, insulate even when wet, fleece is warmer for its weight than wool

**Outer Layer** (shell) - protects from wind and precipitation

Fabric choices - waterproof and breathable fabrics like Gortex are best, coated fabrics with venting are ok.

**Socks** - Wool socks or polypropylene/wool blend

**Gaiters** - Knee-high gaiters keep the snow out of your boots

**Hat** - A wool cap or a lightweight, windproof, microfleece which will also cover ears

**Hypothermia** - occurs when the inner body temperature drops to a subnormal level, body heat is being lost faster than it can be produced, organs lose the ability to function

- #1 killer of outdoor traveler
- most cases of hypothermia occur between 30-50 degrees F, greatest hazards are windy and wet weather
- symptoms
  - uncontrollable shivering
  - memory lapses
  - slurred speech
  - stumbling
  - drowsiness
- treatment
  - remove wet clothing
  - give hot liquids, no alcohol
  - warm victim by building a fire or with hot water bottles
- prevention
  - wear wool or polypropylene, both insulate when wet and wicks moisture away from the body
  - dress in layers
  - eat high protein/energy foods
  - drink plenty of liquids
  - stay dry
  - wear a hat

### **Frostbite**

- Frostbite is a localized freezing of tissue.
- In the early stages, skin around the effected area will look flushed and will feel like it is burning, itching, tingling, and will be numb.

- The area will turn whitish to yellowish and appear waxy as ice crystals form under the skin.
- Do not rub frostbitten area or warm by fire.
- Best way to warm is to place on warm skin.
- Once frostbitten, the area will be more susceptible to refreezing.

### **Environmental Issues**

- Habitat loss
  - Space/development issues
  - Deforestation
  - Human population
  - Wildlife management
- Litter
  - Recycling
  - Land pollution

### **Additional Resources**

Polk County Conservation - [www.leadingyououtdoors.org](http://www.leadingyououtdoors.org)  
11407 NW Jester Park Drive  
Granger, IA 50109  
515-323-5300

Iowa Department of Natural Resources - [www.iowadnr.com](http://www.iowadnr.com)

Winter activities information – [www.backpacking.net/winter](http://www.backpacking.net/winter) (winter hiking and snowshoeing)